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# SOUTHWEST GAS CORPORATION

September 29, 2005

Arizona Corporation Commission
Docket Control
1200 West Washington Street
Phoenix, AZ 85007-2996

Docket Control Supervisor:

Subject: Testimony Summaries
General Rate Case; G-01551A-04-0876

Please find attached an original and thirteen (13) copies of the summaries of the testimonies of witnesses for Southwest Gas Corporation (Southwest) in the above proceeding. These summaries are being filed in accordance with Administrative Law Judge Dwight D. Nodes' Procedural Order, dated February 7, 2005. An additional copy is included for date/time stamp and return to Southwest. Copies of the testimony summaries are being provided under separate cover to the Administrative Law Judge, the Commissioners, the Commissioners' aides, and the parties of record in accordance with the above referenced Procedural Order.

Should you have any questions, please do not hesitate to contact me at (702) 364-3079.

Respectfully submitted,

Randall W. Sable

Randall W. Sable
Manager/State Regulatory Affairs

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lr/Attachments

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Robert Gray, ACC
Jason Gellman, ACC
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Scott Wakefield, RUCO
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# SOUTHWEST GAS CORPORATION

Docket No. G-01551A-04-0876

# 2004
# ARIZONA
# GENERAL RATE CASE

## TESTIMONY SUMMARIES



September 29, 2005

# SOUTHWEST GAS CORPORATION

**ARIZONA GENERAL RATE CASE**
**G-01551A-04-0876**

## TESTIMONY SUMMARIES

**LIST OF WITNESSES**

Jeffrey W. Shaw

Christina A. Palacios

Steven M. Fetter

Christy M. Berger

James L. Cattanach

Vivian E. Scott

A. Brooks Congdon

Edward B. Gieseking

Frank J. Hanley

Theodore K. Wood

William N. Moody

Marti Marek

Robert M. Johnson

Lisa E. Moses

Randi L. Aldridge

Robert A. Mashas

JEFFREY W. SHAW

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT TESTIMONY OF JEFFREY W. SHAW**

Jeffrey W. Shaw, the Chief Executive Officer of Southwest Gas Corporation (Southwest), provides the overall reasons for rate relief in the Arizona rate jurisdiction in his prepared direct testimony. His testimony focuses on Southwest's continued inability to earn its Commission-authorized rate of return, and he introduces several interrelated pricing alternatives for consideration by the Commission that Southwest believes will improve its opportunity to earn a reasonable return.

Mr. Shaw testifies that Southwest earned only 5.47% (unadjusted) on its investment in Arizona during the test year, and that this level of earnings does not generate sufficient income or cash flow to adequately sustain Southwest's Arizona operations. In addition, the inadequate earnings and cash flows do not provide assurances to investors and creditors from whom Southwest must obtain capital to fund necessary infrastructure-related capital improvements. Mr. Shaw also indicates that Southwest has been unable to earn its authorized return in Arizona over a number of years despite the fact that it has implemented several cost control measures, attained one of the best customer-to-employee ratios in the industry (a key productivity factor), and maintained excellent levels of customer satisfaction. Mr. Shaw emphasizes that Southwest's inability to actually realize the Commission-authorized return harms Southwest's capital structure which directly results in higher financing costs that unnecessarily increase rates to Southwest's customers.

Mr. Shaw further testifies that Southwest's inadequate returns in Arizona are largely due to three factors. First, the Commission's authorized pricing (rate design) of the utility's services fails to reflect the fact that, absent the cost of gas itself, the cost of service is largely fixed and does not vary by customers' consumption. Second, declining average residential use per customer, in addition to a volumetric rate design, has negatively impacted Southwest's margins and strained its return on equity and, in turn, its capital structure. Third, the use of a historic test year in Arizona, combined with rapid growth in the Arizona service areas, results in nearly constant financial attrition.

In terms of the pricing of Southwest's services, Mr. Shaw expresses the importance of the Commission (1) recognizing that the majority of Southwest's costs are fixed and do not vary with changes in consumption and (2) approving a rate design that will permit Southwest an improved opportunity to recover its cost of service. Mr. Shaw encourages the Commission to move away from including large proportions of Southwest's cost of service in commodity rates because a rate design that recovers fixed costs through commodity-based rates can hurt both the customer and Southwest when the weather is significantly colder than normal or warmer than normal. As such, Mr. Shaw suggests a more equitably balanced solution be sought by moving toward a rate design that recovers more of its cost of service through fixed charges. In further support of this concept, Mr. Shaw also encourages the Commission to authorize a margin decoupling mechanism (Southwest's proposed Conservation Margin Tracker or CMT) to combat the dilapidation in its returns that have occurred due to declining average residential usage. The institution of a decoupling mechanism would serve several purposes, including the following: (1) it would remove the inherent disincentive to Southwest to aggressively encourage conservation of natural gas, (2) it would provide reasonable assurance that Southwest's Commission-authorized costs will be recovered, and (3) it would protect the customer from an over-recovery of fixed costs during a colder than normal heating season. As such, Mr. Shaw recommends the Commission implement rate designs and other margin-protection mechanisms to permit Southwest an improved opportunity to realize the Commission-authorized return, which will likely lead to an improved capital structure and better credit ratings which, in turn, benefits Southwest's customers through a lower cost of capital.

Mr. Shaw also testifies that Southwest's capital structure has been negatively impacted by the currently authorized rate design combined with declining average residential use per customer. These two factors impede Southwest's ability to earn its Commission-authorized return. This problem has been further exacerbated by high growth and the need to enhance and replace infrastructure. This, in turn, has led to a more leveraged capital structure and generally higher capital costs due to the increased risk. As such, Mr. Shaw implores the Commission to recognize this increased risk by authorizing a hypothetical capital structure and providing a reasonable, risk-adjusted return on equity.

**CHRISTINA A. PALACIOS**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL, SUPPLEMENTAL REBUTTAL, AND REJOINDER TESTIMONIES OF CHRISTINA A. PALACIOS**

## Direct Testimony

Christina A. Palacios, Senior Vice President/Central Arizona Division of Southwest Gas Corporation (Southwest), provides an overview of Southwest's Arizona operations, including Southwest's focus on safety and customer service/satisfaction, as well as Southwest's efforts to increase productivity and control costs.

Ms. Palacios describes the increased incidences of third-party damage to Southwest's facilities due to rapid housing growth and expansion of infrastructure in both Pima and Maricopa Counties. She also describes Southwest's proactive steps to reduce future damage and reduce response times by increasing outreach efforts with contractors and enhancing training of Southwest personnel in new safety and operational practices. She further describes how Southwest has reached out to local fire and emergency personnel and has provided training for those personnel, including, the use of Southwest's Emergency Response Facility located in Tempe, Arizona.

Ms. Palacios testifies how Southwest has increased productivity and controlled its costs, while maintaining a high level of customer satisfaction in its rapid growing Arizona service territories. Ms. Palacios refers to statistical evidence in her testimony that demonstrate Southwest's productivity and cost control efforts have provided a direct benefit to Southwest's customers. Specifically, Southwest saved Arizona customers nearly $12 million since 1999 in labor costs due to increased productivity. Furthermore, Ms. Palacios testifies that this labor savings and enhanced productivity was accomplished while still maintaining excellent customer satisfaction ratings. Ms. Palacios further testifies that despite Southwest's cost control efforts, Southwest has maintained a high level of customer satisfaction and she describes how Southwest accomplishes this through employee training and a corporate culture that promotes making customers a top priority. Since 1994, Southwest's customer satisfaction ratings in both its Central and Southern Arizona Divisions have been 92% or higher. Southwest's commitment to excellent customer service was further confirmed by Southwest being named the best gas utility in terms of customer satisfaction in the western region of the United States by J. D. Power & Associates in 2003.

Ms. Palacios further describes the tremendous strain placed on Southwest's financial resources due to the significant growth that has been and continues to be experienced in its Arizona service territories. Ms. Palacios testifies that through a concerted effort to control costs and manage growth, Southwest has mitigated this strain through increased productivity and cost control efforts by utilizing information technology and other novel means, such as, increasing the use of joint trenching opportunities with other utilities, requiring builders and developers to share in the cost of new infrastructure, and requiring builders and developers to provide the trench for natural gas and other underground facilities (removing one of the largest costs of installing pipelines). Ms. Palacios also explains how these efforts benefit Southwest's Arizona customers.

## Rebuttal Testimony

In Ms. Palacios' rebuttal testimony, she responds to the Residential Utility Consumer Office's (RUCO) proposal to disallow the compensation of thirty-seven Southwest employees. Ms. Palacios testifies that that RUCO's proposal is unwarranted, that the compensation of the employees is a reasonable and ordinary utility business expense, and that the responsibilities and duties of the employees offer numerous benefits to Southwest's customers.

Ms. Palacios explains that RUCO's proposed disallowance of the compensation of thirty-seven employees is based upon a misunderstanding that the subject employees' primary responsibilities are related to the functional areas of marketing and/or sales. Ms. Palacios further testifies that RUCO did not propound any discovery concerning these employees' duties and responsibilities and that RUCO does not assert that their compensation is unreasonable or excessive. Ms. Palacios attempts to clarify RUCO's misunderstanding by identifying the various job titles and describing the duties and responsibilities of the employees whose compensation RUCO proposes to disallow.

Ms. Palacios testifies how these employees are essential in ensuring new customers are extended gas service in an efficient and effective fashion by monitoring progress and maintaining oversight of the extension of gas service from the initial contact with a customer until the service line, riser, and the meter are installed on the customer's property; by providing customers necessary information to establish gas service; by educating and providing advice to customers regarding technical needs and specifications; by coordinating new business processes; by investigating customer complaints; by ensuring customer service; by interpreting and applying tariffs for main/service extensions; and by negotiating special contracts, among other things. Furthermore, Ms. Palacios also testifies how several of these positions also have regulatory responsibilities, including attendance and participation at workshops, hearings, and Open Meetings to provide information to Commissioners and consumers, among others, as well as to monitor Commission actions related to Southwest and other energy utilities.

## Supplemental Rebuttal Testimony

Ms. Palacios also responds to Staff witness Mr. Bob Gray's request that Southwest consider the adoption of a four-hour service window by explaining that Southwest's current policy is to provide a four-hour service window upon customer request and that Southwest is willing to continue its current policy.

## Rejoinder Testimony

In her rejoinder testimony, Ms. Palacios responds to the surrebuttal testimony of Mr. Rodney Moore of RUCO regarding its continued insistence on disallowing the total compensation of 37 employees and the surrebuttal testimony of Mr. Robert Gray of Staff regarding the requirement that Southwest adopt a four-hour service window for all customers as a standard practice.

Ms. Palacios points out that RUCO is relying on "dated" information to determine its proposed disallowance, as well as placing reliance on a Commission decision from 1990 (versus a more recent Commission decision issued in Southwest's last Arizona general rate case). She notes that the 37 employees are critical to providing gas service to new customers, and if the Commission were to adopt RUCO's proposed disallowance, Southwest would likely experience significant difficulties in extending service to new customers in Arizona.

Ms. Palacios testifies in her rejoinder testimony that Southwest provides its nearly 900,000 Arizona customers a number of service options. These include a two-hour, four-hour or eight-hour service window, an "hour ahead" call option, and a customer arrangement where they can provide access to their premises by leaving a key with a neighbor or in some location that Southwest can access.

Ms. Palacios further testifies that Southwest is different than electric or other utilities as the Company requires access to the inside of the premises for safety purposes, to test appliances, and to check and light pilots. Ms. Palacios also points out that Southwest must respond to line breaks and gas leaks, that are, by their very nature, unscheduled, and that these must be given the highest priority by its service technicians. As a result, Southwest could not "guarantee" that a four-hour service appointment would always be kept.

Ms. Palacios concludes by describing the extremely difficult and inequitable position the Company would be in if both RUCO's proposed disallowance of the total compensation of 37 employees was disallowed from the cost of service and if Southwest was required to provide a four-hour service window for each and every customer, as recommended by Staff, which will likely require additional costs that are not reflected in the Company's cost of service in this proceeding.

**STEVEN M. FETTER**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF STEVEN M. FETTER, PRESIDENT, REGULATION UnFETTERED**

## Direct Testimony

Mr. Fetter is former Chairman of the Michigan Public Service Commission and former Group Head and Managing Director of the utility ratings practice at Fitch, Inc., one of the three major international credit rating agencies along with Standard & Poor's and Moody's.

In his direct testimony, Mr. Fetter offers his opinion, based upon his prior experience as a state utility regulator and with a credit rating agency, as to what comprises fair and economically prudent regulation within today's diverse U.S. gas distribution industry. The testimony focuses on a forward-thinking concept that seeks to decouple sales levels from the Southwest Gas Corporation ("Southwest" or "Company") core revenues, thus allowing conservation gains to be made without compromising the interests of Southwest's equity and debt investors. This new concept in rate design, called a conservation margin tracker ("CMT"), which has been endorsed in a landmark agreement among environmental, gas industry, and regulatory leadership -- and is currently being utilized in other jurisdictions -- holds out promise for a break from past regulatory policies in a way that strikes a fair balance between customer and shareholder interests. Remembering the challenges he faced as a regulator to achieve such a "win-win result" years ago, Mr. Fetter strongly urges the Arizona Corporation Commission ("Commission") to give serious consideration to this innovative program and authorize Southwest to undertake its implementation.

Mr. Fetter then focuses on the fact that, with gas prices escalating, many gas distribution companies are facing margin deterioration from growing efficiency of customer usage at the same time that they are having to invest substantial amounts of funds in capital infrastructure programs to ensure reliability and meet growing demand. With such a significant need for funds in a time of tightening margins, he explain why utilities operating within today's more challenging financial environment, and their regulatory authorities, should seek to minimize the regulatory uncertainties that could affect a utility's financial profile, its credit ratings, and thus its access to capital on favorable terms.

Mr. Fetter then relates these factors to the current credit ratings and capital market access of Southwest and offers caution about how they could be affected by the final decision of the Commission in this proceeding. In particular, he addresses Southwest's current credit ratings which are at or near the bottom of the investment-grade category. This status places Southwest in a very difficult situation under current industry circumstances, because it chills the interests of investors in committing funds to the Company and results in increased cost of debt and equity capital, which translates into higher rates for consumers.

**Rebuttal Testimony**

In his rebuttal testimony, Mr. Fetter responds to positions taken by Arizona Corporation Commission Utilities Division Staff ("Staff") and other intervenors that, if adopted by the Commission, will maintain Southwest at its current inadequate level of financial health. Specifically, he finds fault with the outright rejection by Staff and virtually all intervenors of Southwest's effort to structure a mechanism to provide recovery of revenues the Company has lost and will continue to lose due to customer conservation, called a conservation margin tracker ("CMT").

Mr. Fetter further disputes the positions taken by Staff and intervenors in opposition to additional rate design modifications proposed by Southwest, either in concert with the CMT or by themselves, to help the utility achieve financial returns consistent with Commission-authorized levels. In fact, Staff, RUCO and SWEEP/NRDC not only reject Southwest's proposed margin-protection mechanism and alternative rate design proposals, but each of them advances rate design proposals that would exacerbate the Company's problems by placing an even greater amount of Commission-authorized revenue at risk for recovery.

Mr. Fetter concludes that if the Commission were to reject the CMT and maintain the status quo with regard to other aspects of Southwest's current rate design, the Company will continue to function with a weak financial profile, one or two notches away from the below-investment grade threshold, and this status will negatively affect Southwest's access to the capital market to the detriment of both customers and investors.

**Rejoinder Testimony**

In his rejoinder testimony, Mr. Fetter further responds to arguments from SWEEP/NRDC and Staff that, if adopted by the Commission, will maintain Southwest at its current inadequate level of financial health. Specifically, Mr. Fetter finds fault with SWEEP/NRDC calling for Commission adoption of an increase in funding for DSM programs, while opposing all means of improving (and ultimately stabilizing) Southwest's financial health going forward – including rejection of the CMT as well as other remedial rate design modifications.

Mr. Fetter also clarifies that his support for a CMT does not represent sponsorship of an "experimental concept" as is argued by Staff. Rather, Mr. Fetter explains that a CMT represents a forward-thinking concept that has already garnered wide-ranging interest group support and is currently being utilized in other jurisdictions and has been for several years.

Finally, Mr. Fetter responds to Staff argument that a resolution adopted by the Board of Directors of the National Association of Regulatory Utility Commissioners ("NARUC") discussing CMT-like mechanisms was merely a "neutral" statement exhibiting no support for such mechanisms. Mr. Fetter details the many steps that preceded NARUC adoption of this resolution as well as the specific language of the resolution in order to show that the NARUC action represented more than merely a "neutral" statement.

**CHRISTY M. BERGER**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT TESTIMONY OF**
**CHRISTY M. BERGER**

Christy M. Berger, Senior Specialist in the Pricing &Tariffs Department submits direct testimony sponsoring Southwest Gas Corporation's (Southwest) Class Cost of Service Study (CCOSS) at present and proposed rates. She discusses the results of the two studies and the resulting four summary schedules, as well as the purpose of preparing a CCOSS. Ms. Berger further describes the process used to develop the CCOSS and testifies regarding the methodology used to prepare the current CCOSS.

Ms. Berger includes four summary schedules with her testimony. Schedule G-1A, Sheet 1, illustrates the rate of return on investment at current rates for the present rate schedules. Schedule G-1B, Sheet 1, indicates the rate of return at present rates and proposed rate schedules. Workpaper G-2B, Sheet 1, illustrates the margin required for each proposed rate schedule to achieve the system average rate of return. Schedule G-2B, Sheet 1 shows the results of the CCOSS at proposed rate schedules and proposed rates.

Ms. Berger testifies that the purpose of preparing a CCOSS is to determine the cost of providing service to each class of customer. In addition, it provides a tool to evaluate return on investment for each customer class. This provides a basis for the determination of customer class margin responsibility and rate design.

With regard to the preparation of the CCOSS, Ms. Berger testifies that it was prepared through the process of functionalization, classification, and allocation of the costs to provide service. In the functionalization process, investments in plant and expenses are assigned to the appropriate operating function. Cost Classification then analyzes the relationship between costs and the cause of the costs, which are demand, customer, or commodity-related. The final step of cost allocation utilizes ratios to distribute classified costs to each rate class. Ms. Berger also testifies that Southwest prepared the CCOSS at both present and proposed rates utilizing the same methodology that was used and accepted in the previous general rate case filing, Docket No. G-01551A-00-0127.

**JAMES L. CATTANACH**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT AND REJOINDER TESTIMONIES OF**
**JAMES L. CATTANACH**

**Direct Testimony**

Mr. James L. Cattanach, Manager/Demand Planning of Southwest Gas Corporation (Southwest) provides an analytical perspective on the historical declines in residential consumption per customer experienced in Arizona, a research report that presents an estimated residential price elasticity of demand, and support for the weather normalization adjustment of the volumes for the test period.

Mr. Cattanach testifies that Southwest has experienced a significant downward trend in residential consumption per customer between 1986 and 2004. Mr. Cattanach states that weather normalized residential consumption per customer has declined from 555.6 therms in Southwest's 1986 rate case to 347.0 therms in the current case. This is a decline of 208.6 therms or 37.5%. He also states that residential consumption per customer dropped 41.4 therms or 10.7% since Southwest's last general rate case (Docket No. G-01551A-00-0309). Mr. Cattanach explains that the overall decline in residential consumption per customer is related to both new customers and the existing customer base, and are likely the result of improved appliance and dwelling efficiencies, increased utilization of set-back thermostats, changes in the characteristics of the housing stock, demographic factors, behavioral factors, and economic variables such as price.

Mr. Cattanach sponsors an empirical research report (The Residential Price Elasticity of Demand for Natural Gas in Arizona: An Econometric Analysis) that presents an estimated residential price elasticity of demand for Southwest's Arizona rate jurisdiction. He states that the econometric results suggest the residential price elasticity of demand is relatively inelastic (demand is insensitive to changes in price) and equal to approximately -.31 in the long run.

Mr. Cattanach also sponsors the weather normalization adjustment to the volumes for the test period. He states that the test period actual billing cycle heating degree days were approximately 1.9 percent colder than normal in Tucson and approximately 2.8 percent warmer than normal in Phoenix. Mr. Cattanach also notes that a regression analysis was utilized to quantify the monthly consumption per heating degree day factors (regression coefficients) for each heat-sensitive customer class, and that ten-year averages (120 months ended August 2004) of heating degree days were used to represent normal weather. Mr. Cattanach also testifies that Southwest has consistently used ten-year average heating degree days to weather normalize test period volumes in every general rate case filed in Arizona since 1986. Mr. Cattanach further testifies that the net result of the weather normalization adjustments was a decrease in test year volumes of 566,341 therms.

**Rejoinder Testimony**

Mr. Cattanach, in his rejoinder testimony, addresses the assertion made by Staff witness Mr. William H. Musgrove in his surrebuttal testimony that "Southwest refuses to accept that average sales per residential customer have been decreasing at rates that are driven by increases in the number of customers." Mr. Cattanach reaffirms Southwest's position that improvements in appliance and dwelling efficiencies and rapid customer growth are the primary factors contributing to declines in overall residential consumption per customer. He presents the research results from a number of quantitative studies that utilized both time series and cross-sectional data sets. The empirical results overwhelmingly indicate that both vintage and new customers are contributing to the decline in overall residential consumption per customer.

Mr. Cattanach also responds to the statement made by Mr. Musgrove that "Furthermore, Staff believes that the reported impact of a decline in residential sales per customer of approximately 10.7 percent since 1999 is overstated." Mr. Cattanach points out that the decline of 41.4 therms per customer or 10.7 percent between the 2000 and 2004 rate cases is a straightforward arithmetic calculation that provides no allowance for overstatement.

**VIVIAN E. SCOTT**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF VIVIAN E. SCOTT**

**Direct Testimony**

Vivian E. Scott, Manager of Research/Conservation and Demand Side Management (DSM) at Southwest Gas Corporation (Southwest), provides an overview of the current and new conservation and energy efficiency programs that Southwest is proposing. She also discusses the proposed cost recovery mechanism and approval process for the programs.

Ms. Scott describes Southwest's two existing DSM programs: 1) the Low-Income Energy Conservation (LIEC) program; and 2) the Energy Advantage Plus (EAP) program. She also explains Southwest's proposed modifications to those programs.

Ms. Scott then explains that Southwest chooses to expand its conservation and energy efficiency program portfolio because it is in the best interests of its customers, the State of Arizona, and the overall resource mix. She further testifies that an expanded set of programs enables Southwest to serve all customer segments—residential, commercial, and industrial, and throughout the state of Arizona, rather than only in certain geographic areas. She also explains that the expanded programs benefit the overall resource mix, by reducing the demand for natural gas and electricity, improving air quality, and conserving water.

Ms. Scott describes in her testimony the three new conservation and energy efficiency programs for residential customers: 1) Multi-Family New Construction; 2) Residential Energy Conservation; and 3) Energy Star® Appliances. Ms. Scott notes that the multi-family program is targeted at two groups (renters and condominium owners) who are often under-served by existing programs. The total funding level for all of the residential conservation and energy efficiency programs, both existing and new, is $2.95 million per year.

Ms. Scott also presents an overview of the four new conservation and energy efficiency programs for commercial and industrial customers: 1) Food Service Equipment; 2) Efficient Commercial Building Design; 3) Technology Information Center; and 4) Distributed Generation. Ms. Scott also notes that the Food Service Equipment program has an added benefit of saving significant volumes of water. The proposed funding level for the four new commercial and industrial programs is $1.435 million per year. The proposed funding level for all of the commercial and industrial conservation and energy efficiency programs is $4.385 million per year.

Ms. Scott also testifies regarding the proposed cost recovery mechanism for the programs and explains that the mechanism is similar to the one currently in place, and that the projected future surcharge would be approximately $0.00724 per therm for all customers. Ms. Scott also describes the proposed two-part approval process for the programs. First, Southwest would request approval from the Commission for the proposed funding level. If approved, then Southwest would submit its proposed programs for pre-approval after the conclusion of the general rate case.

**Rebuttal Testimony**

In her rebuttal testimony, Ms. Scott addresses the following five issues: 1) progress reports and filing practices; 2) the bill assistance component of the Low-Income Energy Conservation (LIEC) program; 3) the collaborative process; 4) a performance incentive; and 5) the relationship between decoupling mechanisms and energy efficiency programs.

In her testimony, Ms. Scott testifies that the existing filing practices should continue into the future, but submits that Southwest does not agree that officer certification of the report is necessary. Ms. Scott also addresses the Arizona Corporation Commission Utilities Division Staff's proposal that the bill assistance component of the LIEC program be eliminated, and explains why Southwest contends that emergency funding should be retained.

Ms. Scott testifies that Southwest generally supports the DSM collaborative process, but that Southwest does not agree that members of the collaborative process be permitted to submit program plans to the Commission for approval. Ms. Scott further testifies that Southwest supports the performance incentive proposed by SWEEP/NRDC. Ms. Scott also emphasizes Southwest's contention that the performance incentive should not be a substitute for the Conservation Margin Tracker proposed by Southwest witness, Mr. Edward B. Gieseking. Ms. Scott further discusses the fact that there should not be a financial disincentive for Southwest to actively encourage customers to conserve natural gas and reaffirms the importance of decoupling mechanisms in addressing this disincentive.

**Rejoinder Testimony**

Ms. Scott, in her rejoinder testimony, responds to the following three issues presented in the surrebuttal testimony of Staff witness Mr. Steve P. Irvine: 1) DSM program approval process; 2) scope of the Energy Star® Home Certification program; and 3) performance incentive. Regarding the program approval process, Ms. Scott clarifies that Southwest expects to obtain Commission approval for the proposed programs and the funding level of those programs in this proceeding. Southwest will then submit detailed program plans to the Commission for final approval within 120 days of a decision in this general rate case.

For the Energy Star® Home Certification program, Ms. Scott explains that Southwest will offer the program at whatever funding level the Commission deems reasonable and appropriate (within the context of the entire DSM program portfolio). With a higher funding level, the program would be able to reach more builders and new homebuyers.

Ms. Scott also notes that Southwest submits that it should be allowed to earn a performance incentive for effective DSM program performance. The incentive would be a beneficial and equitable item for the Commission to approve, since a financial disincentive exists for Southwest to promote energy efficiency, and because the Commission has already granted Arizona Public Service Company a similar performance incentive for its DSM programs. Ms. Scott also re-emphasizes that the performance incentive should not be viewed as a substitute for approval of the conservation margin tracker requested in this proceeding.

**A. BROOKS CONGDON**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL, AND REJOINDER TESTIMONIES OF A. BROOKS CONGDON**

## Direct Testimony

A. Brooks Congdon, Manager/Pricing and Tariffs, testifies regarding the development of Southwest's proposed rates and tariff changes, and he quantifies the revenue impact of Southwest's proposed rate and tariff changes. He also discusses Southwest's adjustments to customer bills and volumes, the allocation of margin to customer classes, and the annualization of gas costs for ratemaking purposes.

In his direct testimony, Mr. Congdon explains the six-step process employed by Southwest to ensure that test period bills and volumes accurately reflect a full twelve months of consumption under normal weather conditions for each active customer under Southwest's rate schedules. Southwest's adjustments to bills and volumes by rate schedule are summarized in Schedule H-2, Sheets 13 – 15. Mr. Congdon further testifies regarding Southwest's proposed multi-family and single-family residential rate schedules, residential rate designs with and without the Conservation Margin Tracker mechanism, and Southwest's proposal to create a new rate schedule applicable to its smallest general service customers. Mr. Congdon also quantifies the impact on customer bills of Southwest's proposed changes to rates and rate design, which are illustrated in Schedule H-4.

Mr. Congdon testifies that Southwest's methodology for allocating the proposed margin to customer classes by utilizing its embedded customer class cost of service study recognizes the need for gradualism in rates while reducing interclass rate subsidies because the resulting rates more closely reflect Southwest's cost of providing service. Mr. Congdon further explains that the objective of Southwest's proposed change in rate design is to balance the movement toward cost-of-service based pricing with the competing need for gradualism in rates. Southwest's proposed allocation of margin is illustrated in Schedule H-6, Sheets 1 and 2.

## Rebuttal Testimony

Mr. Congdon responds to concerns raised by the Residential Utility Consumer Office (RUCO) and the Arizona Corporation Commission Utilities Division Staff (Staff) regarding Southwest's proposed rate design and tariff changes. Mr. Congdon discusses the importance of setting rates for utility service that reflect the long-term cost to the utility of providing service, and also explains why the residential rate designs proposed by RUCO and Staff are not based on Southwest's cost of providing service; whereas Southwest's proposal reflects a balance of cost-of-service based pricing and gradualism in setting rates.

Mr. Congdon testifies that Southwest's proposed rate design and tariff changes better reflect Arizona's changing energy marketplace and will result in lower long-term average cost-of-service for Arizona's electric and natural gas utility customers than the proposals submitted by RUCO and Staff. Mr. Congdon's rebuttal testimony includes tables, exhibits, and references to schedules that were filed with Southwest's application illustrating the benefits and the reasonableness of Southwest's rate design proposals. Mr. Congdon also discusses why the cost of providing service is not the same for electric and gas utilities, and why the resulting rate designs should also not be the same. Mr. Congdon explains how Southwest's proposed residential rate design provides customers a price signal that more closely reflects Southwest's marginal cost of service, i.e. the cost of gas, than either RUCO's or Staff's proposals, and also presents evidence demonstrating how Southwest's proposed residential rate design benefits customers if weather is colder than normal and it benefits the Company if weather is warmer than normal. Mr. Congdon also presents evidence that Southwest's proposed residential rate design does not adversely affect low-income customers.

With regard to Southwest's rate design proposals for non-residential customer classes, Mr. Congdon explains that Southwest's proposal strikes a better balance of cost-of-service based pricing and gradualism in setting rates than either RUCO's or Staff's proposals. He also explains that several of Staff's rate design and other tariff change proposals actually have an adverse effect on Southwest's effort to stabilize revenue recovery and improve its financial performance; whereas Southwest's rate design and tariff change proposals are better for Arizona's citizens.

Mr. Congdon testifies that Southwest's proposal to create new rate schedules for its multi-family residential and smallest general service customers provides an opportunity to reduce the impact on these customers of moving rates for all customers closer to Southwest's cost of providing service, and why Staff's recommendation to allow Gas Service to Armed Forces and Small Essential Agricultural Gas Service customers to switch to Southwest's General Service rate schedules after the conclusion of the rate case is tantamount to designing an under-recovery of margin into rates. Mr. Congdon further testifies that several of Staff's other rate design and tariff change proposals, including: 1) the determination of billing volumes for Southwest's largest general service customers, 2) increasing the margin allocated to Rate Schedule No. G-80, and 3) increasing the Purchased Gas Adjustment bank balance trigger but not increasing the cap on changes in Monthly Gas Cost Adjustment, actually have adverse effects on Southwest's customers.

**Rejoinder Testimony**

Mr. Congdon discusses the following five aspects of Southwest's rate design proposals in his rejoinder testimony:

1. Southwest's proposed residential rate design shields customers from high winter bills.
2. RUCO's and Staff's proposed residential rate designs increase Southwest's risk of not recovering its revenue requirement when usage is declining and, conversely, increase the risk to customers of higher bills during a cold weather event.
3. Southwest's adjusted test period bills and volumes are appropriate.
4. Southwest's margin allocation is appropriate.
5. Southwest's proposed G-25 rates reflect an appropriate balance of movement toward cost-based pricing and gradualism.

Mr. Congdon explains that Southwest's proposed changes to residential rate designs will provide relief to customers from high winter bills by "unloading" non-cost-of service based charges from the second block of the proposed rate design. The differences in the impact on customers' January bills between Southwest's and RUCO's and Southwest's and Staff's proposed residential rate designs are summarized in the in the tables below.

**Single-Family Residential**

| | Therms | SWG less RUCO | SWG less Staff |
|---|---|---|---|
| 1st 5% of Bills | 11 | $ 4.03 | $ 4.91 |
| Mid-Point | 35 | 8.12 | 7.22 |
| Most Bills | 60 | 0.64 | (0.85) |
| Mid-Point | 105 | (12.82) | (15.40) |
| 95% of Bills | 155 | (27.78) | (31.56) |

**Low-Income Single-Family Residential**

| | Therms | SWG less RUCO | SWG less Staff |
|---|---|---|---|
| 1st 5% of Bills | 14 | $ 3.49 | $ 3.05 |
| Mid-Point | 35 | 6.22 | 5.10 |
| Most Bills | 55 | 1.14 | 0.19 |
| Mid-Point | 100 | (10.31) | (10.89) |
| 95% of Bills | 145 | (21.75) | (21.96) |

As such, Southwest's proposed rate design provides relief from high winter bills to large volume residential customers, including Southwest's low-income customers. These are the customers that are the most severely impacted by high winter bills and, therefore, are the customers in need of the greatest degree of relief because they are already paying significantly more in gas costs than Southwest's small volume residential customers.

Mr. Congdon testifies that both RUCO's and Staff's proposed residential rate designs increase Southwest's risk of not recovering its authorized revenues as well as increasing the risk to residential customers of high winter bills. Mr. Congdon explains that volatility in Southwest's revenues and customer bills is directly related to the price per therm for customers' incremental natural gas usage as demonstrated in the following table.

| Description | SWG Current | SWG w CMT | SWG no CMT | Staff* | RUCO* |
|---|---|---|---|---|---|
| Marginal Price | $.40344 | $.25000 | $.15000 | $.57320 | $.54911 |
| 10 Therm Change in Use | $4.03 | $2.50 | $1.50 | $5.73 | $5.49 |

*Staff's and RUCO's rates are calculated at Southwest's proposed residential margin.

As such, Southwest's proposed residential rate designs reduce volatility by reducing the price per therm for incremental usage vis-à-vis RUCO's and Staff's proposals.

Mr. Congdon discusses RUCO witness Mr. Rodney L. Moore's adjustment to Southwest's recorded test year bills and volumes. Mr. Congdon points out that RUCO's adjustment is unnecessary, and that Mr. Moore's calculations contain several errors, in addition to his initial misuse of bill frequency data already discussed in Mr. Congdon's Rebuttal testimony, which render RUCO's adjustment unusable. Mr. Congdon explains that Staff uses high gas prices as justification to limit the allocation of Southwest's margin; i.e. the cost of operating Southwest's distribution system, to residential customer classes and shift margin to general service customers. Mr. Congdon points out that today's higher gas costs affect all Arizona natural gas and electric customers and that higher gas costs should not be used as an argument to relieve the residential customer classes of paying their fair share of the cost of operating Southwest's distribution system at the expense of commercial and industrial customers. Mr. Congdon also explains that in RUCO's testimony, RUCO's proposed rate design generates 67.16% of margin from the residential class of service is inaccurate. RUCO's proposed residential rates actually generate 65.09%, or $7.7 million less, in margin from residential classes than it states.

**EDWARD B. GIESEKING**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF EDWARD B. GIESEKING**

## Direct Testimony

Mr. Gieseking describes how Southwest's proposed rate design will achieve its objective of improving the Company's opportunity to realize the Commission authorized margin levels and explains the justification for the Company's margin decoupling proposal (Conservation Margin Tracker or CMT). Mr. Gieseking also describes Southwest's two alternative residential rate designs and how Southwest's recommended rate structure is dependent upon how the Commission addresses Southwest's CMT proposal. Mr. Gieseking explains that if the Commission authorizes the implementation of the CMT, Southwest recommends a residential rate design that is more reflective of the cost of service than the current rate design. If the Commission does not authorize the CMT, Southwest recommends that the Commission implement a residential rate design that more significantly moves toward cost-based pricing for its gas distribution services.

Mr. Gieseking testifies that traditionally Southwest's residential rates have been designed to recover a significant amount of the fixed costs of service in the commodity portion of the rate structure. Accordingly, the fact fixed costs of service are recovered in volumetric rates means the only way Southwest can recover per customer operating costs is to maintain test period consumption levels. However, Southwest has been experiencing a decline in residential use per customer over the past several years, and this is the primary reason why Southwest has proposed a decoupling mechanism in this proceeding.

Mr. Gieseking further testifies that decoupling the recovery of fixed costs from the level of sales can be accomplished either through a cost based rate design or, in the alternative, a mechanism that tracks what a cost based rate design would have accomplished and then permitting the utility to adjust rates to achieve the same result. Mr. Gieseking explains that Southwest recommends the Commission adopt a rate design that moves closer to cost of service, and has also introduced an adjustment mechanism alternative (the CMT) that fully tracks fixed costs so they can be recovered by Southwest in rates. As such, the CMT will provide the Company with an improved opportunity to recover its authorized operating costs and will remove the inherent disincentive for Southwest to promote conservation and efficiency programs that result in reduced customer consumption.

## Rebuttal Testimony

Mr. Gieseking testifies that a general rate case proceeding is the proper venue for addressing Southwest's rate design proposals, including the CMT. Mr. Gieseking further submits that there has been ample time for the parties to conduct discovery and to develop a full record addressing Southwest's rate design proposals, including the CMT. Mr. Gieseking also testifies that Southwest justly limited the applicability of the

CMT to residential customers, and that the CMT could be made applicable to non-residential customer classes if requested.

Mr. Gieseking testifies that Southwest has presented uncontradicted evidence that the cost to serve its customers does not vary with changes in customer consumption and that Southwest's residential use per customer has steadily declined for the past several years as a result of increased efficiency in new housing stock as well as increased efficiency of older customers. Consequently, Southwest has not recovered its authorized margin per customer because a significant portion of Southwest's margin recovery is dependent upon the volume of gas sold. Mr. Gieseking also explains why Southwest's proposed rate design will not discourage conservation because customers will save if they conserve. Mr. Gieseking also notes that Southwest's rate design will actually promote consumer decisions that result in the more efficient use of natural gas than either the Staff or RUCO rate design.

Mr. Gieseking also testifies that Southwest's rate design proposal package is consistent with the recommendations contained in the AGA/NRDC Joint Statement. Mr. Gieseking notes that the NARUC Board of Directors encourages state commissions to review and consider such recommendations, and that the National Energy Policy Act of 2005 enacts various incentives for additional energy efficiency and requires the Secretary of Energy to conduct a study of energy reduction and efficiency policy, taking into consideration methods of removing disincentives for utilities to implement energy efficiency programs.

Mr. Gieseking further testifies that Southwest proposed a package of energy efficiency programs in conjunction with its rate design/CMT proposal with the expectation that there will likely be further erosion in average use per customer and with the idea that it would be able to recover its fixed cost of service due to its proposed rate design or decoupling proposal. If Southwest were to implement the energy efficiency programs without some form of decoupling, its recovery of fixed costs would be at greater risk and its realized rate of return will likely be eroded. Accordingly, Southwest suggests that if a decoupling mechanism is not approved in this proceeding, that the implementation of the expanded efficiency programs proposed in this filing be deferred until such time as an appropriate decoupling mechanism is approved.

**Rejoinder Testimony**

Mr. Gieseking responds to the surrebuttal testimonies of Staff, RUCO, and SWEEP/NRDC in four areas: (1) rate design policy and goals; (2) the Conservation Margin Tracker (CMT); (3) energy efficiency program implementation; and (4) the Purchased Gas Adjustor (PGA).

Mr. Gieseking reiterates that Southwest's rate design goals are to stabilize the recovery of revenue and reduce customer bill volatility. He points out that no parties have criticized Southwest's goal of revenue stability but that none have provided a rate design alternative that matches the stability inherent in Southwest's rate design proposals. Mr. Gieseking further notes that neither Staff, RUCO, or SWEEP/NRDC have disputed the facts that: the cost to serve Southwest's customers is virtually fixed; the residential rate design for Southwest relies significantly on volumetric rates to recover fixed costs; average residential consumption per customer has declined after each rate case for the past 18 years; and Southwest has routinely been unable to recover its entire cost of service from its customers.

Mr. Gieseking testifies that all the other intervening parties' rate design proposals would increase the risk that Southwest would be unable to recover its fixed costs. Mr. Gieseking also notes that should the Commission authorize a flat volumetric rate structure for Southwest, that the flat block would have to be set at a rate **no** greater than Southwest's current second block rate, in order to limit the risk of fixed cost recovery.

Mr. Gieseking responds to RUCO's continued assertion that residential customers would pay for therms they do not use if the CMT is approved by the Commission. He testifies that those customers would only pay for the therms they use. He notes those customers would also receive the same service from Southwest irrespective of how much gas they consume and that the CMT is simply a mechanism to ensure that Southwest recovers its cost of service from those customers. Mr. Gieseking also refutes the position of certain parties that the CMT is a new ratemaking process. He points out that the CMT functions similar to Southwest's current PGA mechanism. Mr. Gieseking notes that if the objections to the CMT are related to its "balancing" nature, that there are other decoupling mechanisms that have been adopted by other state commissions that could also provide Southwest surety that its fixed costs will be recovered. Finally, Mr. Gieseking provides an example of what a customer would experience under the CMT if average consumption declined by ten therms. He demonstrates that customers could actually see a decrease in their bills due to the savings related to the cost of gas, even when the CMT surcharge is applied to their bills.

Mr. Gieseking responds to SWEEP/NRDC's proposal to implement and expand energy efficiency programs without the benefit of a mechanism that decouples cost recovery from sales. He states that Southwest cannot, in good faith, support any implementation of new and expanded energy efficiency programs until the interests of customers and shareholders are in balance. He further testifies that rates are established to accurately reflect the cost of service and that it would not be appropriate to establish a rate structure that is not expected to recover that cost of service. He notes that this is exactly what will occur if energy efficiency programs are approved and implemented prior to the decoupling of margin recovery from rates.

Mr. Gieseking responds to Staff's opposition to increasing the $0.10 per therm band on the rolling-average monthly PGA rate adjustment to $0.13 per therm. He notes that due to recent changes in the gas market, including hurricane activity, the cost of gas supplies will remain at elevated levels for a considerable period of time. As such, the use of a $0.10 band will result in additional deferrals to the gas cost balancing account, additional interest charges, and higher rates to customers in future periods. As such, Mr. Gieseking proposes that the Commission consider suspending the band or, in the alternative, increasing the band to $0.20 per therm. He states that although this will not prevent increases in the gas cost balancing account, it will mitigate the amount of deferred gas costs and will minimize accrued interest that customers will have to pay.

**FRANK J. HANLEY**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF FRANK J. HANLEY**

**Direct Testimony**

Mr. Hanley's direct testimony provides evidence which supports Southwest's requested cost of common equity capital of 11.95% relative to its proposed hypothetical common equity ratio of 42.00% if the requested Conservation Margin Tracker (CMT) is not approved but 11.70% if the CMT is approved due to Mr. Hanley's opinion of reduced risk if a CMT is in effect.

Mr. Hanley's recommended common equity cost rates are market-determined rates for Southwest and are also based upon a review of two proxy groups of comparable gas distribution companies (LDCs). Comparison of historical financial data between Southwest and the two proxy groups of LDCs shows that Southwest has earned returns well below those of the proxy LDCs. During the seven years ending 2003, Southwest achieved an average return on actual book common equity (ROE) of only 6.74% in the Arizona jurisdiction, far less than the 11.62% and 12.11% average ROEs of the two proxy groups of LDCs, as shown on Exhibit__(FJH-1), Sheet 4 of 4. It should also be kept in mind that the proxy groups had average common equity ratios greater than Southwest which exacerbates the disparity in Southwest's earned returns on common equity vis-à-vis the proxy group because Southwest's lower equity ratio should have earned a higher rate of return due to greater financial risk in addition to its greater level of business risk consistent with the basic tenets of finance.

Southwest is more investment-risky than the proxy groups of LDCs because of its substantially lower Standard & Poor's (S&P) bond rating of BBB minus. One rating notch lower will put Southwest into the BB bond rating category (below investment grade). If that were to occur, Southwest's bonds would then be considered a speculative investment, i.e., they would be considered junk bonds. Southwest is also more business risky in comparison to the proxy groups of LDCs as evidenced by a higher, more risky, S&P assigned business profile of 3.0 versus average profiles of 1.8 and 2.0, respectively, for the two proxy groups of LDCs, (Exhibit__(FJH-11), Sheet 2 of 9. In addition, many of those LDCs enjoy the benefits of stabilized revenues and earnings attributable to weather normalization clauses in contrast to Southwest which does not have the benefit of such protection. The requested CMT would greatly help to ameliorate Southwest's greater risk attributable to weather and declining per customer usage.

Mr. Hanley believes it essential that Southwest's greater risk be considered when determining an appropriate common equity cost rate and the common equity ratio to which it is applicable. Therefore, Mr. Hanley concludes that the common equity cost rates of the proxy groups must be adjusted to reflect Southwest's greater investment risk.

In reaching his recommended common equity cost rate(s) of 11.95%/11.70%, Mr. Hanley relied upon multiple cost of common equity models, namely, the Discounted Cash Flow, Risk Premium, Capital Asset Pricing, and Comparable Earnings Models. The Efficient Market Hypothesis mandates that investors are aware of all publicly-available information. Accordingly, investors are aware of all of these various types of cost of common equity models, and absent empirical evidence to the contrary, one must assume that they take them all into account in arriving at their buy-sell decisions.

Mr. Hanley's recommendation will afford Southwest the opportunity to earn a rate of return on common equity comparable to the rates actually being earned by other LDCs consistent with the Hope and Bluefield benchmarks, and over time, improve its bond rating so that it is not precipitously close to being downgraded to below investment grade (i.e., to BB). In Exhibit__(FJH-15), Sheet 1 of 1, Mr. Hanley shows that in litigated cases during the period January 1, 2003 through September 30, 2004, the average awarded ROE to an LDC was 10.91% relative to a common equity ratio of 47.68%, indicating the need for a higher awarded ROE to Southwest, which is more risky as to both business and financial risks. Mr. Hanley believes that it is essential that Southwest be afforded an opportunity to earn a competitive ROE relative to its requested hypothetical common equity ratio of 42% (11.95% if the requested CMT is not approved or 11.70% if it is approved) because investors, analysts, and the rating agencies require a positive signal from regulators which demonstrate acknowledgement of Southwest's difficulties and provides the means to improve them, particularly its cash flow.

**Rebuttal Testimony**

Mr. Hanley's testimony rebuts certain aspects of the direct testimonies of Residential Utility Consumer Office (RUCO) Witness William A. Rigsby and Arizona Corporation Commission Utilities Division Staff (Staff) Witness Stephen G. Hill, and responds to Mr. Hill's critique of his direct testimony.

Mr. Hanley explains why Mr. Hill's primary reliance on the Discounted Cash Flow (DCF) Model is contrary to the financial literature, which supports the use of multiple cost of common equity models consistent with the Efficient Market Hypothesis (EMH). The EMH confirms that current market prices reflect all publicly-available information, including investors' knowledge of all of the various cost of common equity models for use in determining common equity cost rate.

Mr. Hanley demonstrates how the application of the DCF model results in an understatement of the cost of common equity capital when market-to-book ratios are significantly greater than one. He also explains why Mr. Hill's assumption of a direct relationship between market-to-book ratios and return on book common equity is erroneous and results in an understatement of the common equity cost rates derived from his Modified Earnings-Price Ratio Analyses (MEPR) and Market-to-Book Ratio Analysis (MTB). Mr. Hanley shows that Mr. Hill's recommended ROE is grossly understated as confirmed by Value Line's Natural Gas Distribution Industry Investment Survey of June 17, 2005 wherein it expects an ROE of 12.5% relative to a 45.5% common equity ratio. Those Value Line forecasts confirm the reasonableness of Southwest's requested ROE(s) relative to a 42% hypothetical common equity ratio. Moreover, in Exhibit __ (FJH-24), Sheet 1 of 1, Mr. Hanley also shows that the average awarded ROE to LDCs in fully litigated cases during the period January 1, 2003 through June 30, 2005 was 10.91% relative to a 47.50% common equity ratio, further confirming the reasonableness of Southwest's requested ROE relative to a 42% hypothetical common equity ratio.

Mr. Hanley also addresses the problems associated with Mr. Hill's application of the Capital Asset Pricing Model (CAPM) which is flawed by virtue of his use of both the geometric and arithmetic mean market risk premiums. When estimating the cost of capital, only the use of the arithmetic mean is appropriate because it takes into account all of the individual values. Professor Jeremy Siegel, a source of authority cited by Mr. Hill, defines risk as the standard deviation of arithmetic returns. As Mr. Hanley explains and demonstrates in Exhibit __(FJH-20), Sheets 1 and 2), only the arithmetic mean provides insight to investors as to the potential volatility associated with a prospective investment.

Mr. Hanley shows that Mr. Hill's criticism of the veracity of beta is misplaced as evidenced by Copeland, Koller and Murrin, authors relied upon as authority by Mr. Hill, who recommend the use of the CAPM.

Mr. Hills' suggestion that the reasonableness of his recommended ROE is confirmed by returns on asset classes of Southwest's pension fund portfolio is flawed. Those returns reflect the risk-reducing benefits of a portfolio of assets in contrast to the risk associated with investment in Southwest's Arizona jurisdictional rate base. Mr. Hanley also provides a number of reasons (at pages 28-31 of his rebuttal testimony) why Mr. Hill's suggestion that the cost of equity to utilities was reduced by 50 basis points due to the 2003 reduced income tax rate on dividends is erroneous.

Mr. Hanley explains why the use of a 3-month U.S. Treasury Bill in the CAPM by Messrs. Hill and Rigsby is incorrect and inconsistent with the long-term cost of equity capital. Also, Mr. Hill's use of total returns on U.S. Treasury Bonds is incorrect as Ibbotson Associates (cited as authority by Mr. Hill) specify that the income return is that which represents the truly riskless portion of the return. Messrs. Hill and Rigsby fail to utilize the empirical CAPM (ECAPM). Mr. Hanley recalculated Messrs. Hill and Rigsby's CAPM results for the traditional and the empirical forms of the model, respectively, and they were as follows: Mr. Hill – 10.48%/10.96% and Mr. Rigsby – 10.77%/11.15%.

Mr. Hanley also responds to Mr. Hill's comments upon his direct testimony. Mr. Hill's statement that Mr. Hanley's RPM, CAPM and CEM analyses use "beta as a measure of relative risk and return" is misleading. Mr. Hanley's application of the RPM utilizes both a beta adjusted equity risk premium and the average utility equity risk premiums over Baa rated and A rated public utility bonds that have nothing to do with beta. The CAPM is a beta-oriented model. Mr. Hanley's CEM is only partially dependent upon beta in that the non-price regulated domestic proxy companies were selected based upon betas and residual standard deviations (standard errors of the estimate). Beta is a measure of systematic (non-diversifiable) risk which represents only a small percentage of total risk, while the residual standard deviation is a measure of unsystematic (diversifiable) risk or the greatest percentage of total risk. Mr. Hanley's selection criteria are based upon total risk. Thus, the companies he selected are comparable in total risk to Southwest and the proxy groups of gas distribution companies.

Mr. Hill's comment "...the real issue with a risk premium analysis is determining the premium with any precision. It is not a directly observable phenomenon and must be estimated..." is also misleading because the same can be said of the growth component of the DCF Model, which is not directly observable and must be estimated through the use of quite a number of accounting proxies as well as many possible combinations of them.

Mr. Hanley explains why Mr. Hill's reference to a "more normal risk premium" over bonds of 2%-3% is incorrect and misleading. For example, a study by Ibbotson and Chen, cited as authority by Mr. Hill, actually concluded that the long-term equity risk premium to be only slightly lower than the straight historical estimate.

Finally, Mr. Hanley notes that Mr. Rigsby's recommended ROE is understated by 0.25% because he reduced his finding to reflect the risk reduction attributable to Southwest's requested CMT, despite the fact that RUCO is opposed to it. Of course, the common equity cost rate recommendations of Messrs. Hill and Rigsby are understated for all of the reasons discussed by Mr. Hanley; i.e., inappropriately applied cost of equity models relative to less risky proxies without the essential additional increments in specific recognition of Southwest's greater risks vis-à-vis those proxies.

**Rejoinder Testimony**

Mr. Hanley, in his rejoinder testimony, demonstrates that the criticisms of his rebuttal testimony by Staff Witness Hill and RUCO Witness Rigsby are without merit and shows why their recommended common equity cost rates are substantially understated.

Mr. Hanley demonstrates, with citations from rate orders of the Pennsylvania Public Utility Commission and the Iowa Utilities Board, that both agencies recognize the need to utilize other cost of equity models (even if as a check) because of the tendency of the DCF model to understate the common equity cost rates when market values exceed book values and when such market-based investors' required rates of return are applied to lower book values. The Pennsylvania Commission actually makes a quantifiable upward adjustment to the market-based DCF cost rate. The Iowa Board views the DCF results against risk premium results and if a DCF cost rate is adopted, it must fall within the range of the DCF and the Board's risk premium range. Those regulatory practices and the academic literature (e.g., Rejoinder Exhibit __ (FJH-29) highlight the fallacy of the assumption of Witnesses Hill and Rigsby that there is a direct correlation between market-to-book ratios and the rates of earnings on book common equity. Moreover, the Iowa Board attributes wide disparities in DCF cost rate results to, among other things, the inputs used for growth in the model.

Mr. Hanley explains why Mr. Hill's criticism of the CAPM (although he himself utilizes it) is unfounded and shows that it is in wide use, especially by investor-influencing organizations like Merrill Lynch as confirmed by his Rejoinder Exhibit __(FJH-30).

Mr. Hanley also demonstrates in his Rejoinder Exhibit __(FJH-31) that Mr. Hill's recommended rate of return, on a pretax basis, will not sustain, much less improve Southwest's current bottom of investment grade S&P bond rating of BBB-. He also explains why Mr. Hill's criticism of his comparable earnings methodology is incorrect through the information contained in his Rejoinder Exhibit__(FJH-32), supported by his Rebuttal Exhibit __ (FJH-28).

Mr. Hanley utilizes the data shown in Rejoinder Exhibit__(FJH-32), supported by his Rebuttal Exhibit__(FJH-28) to (in addition to the above re Mr. Hill) that Mr. Rigsby's comments regarding a utility's market-to-book ratio and its cost of capital are without merit. The ultimate proof of the fallacy of Mr. Rigsby's contention is reflected in the inadequacy of his recommended ROE as evidenced by Value Line's expected earned ROE of the Natural Gas Distribution Industry (Rejoinder Exhibit__(FJH-33) of 12.5% and an average of return regulatory awards of 10.91% ROE relative to a 47.50% common equity ratio (Rebuttal Exhibit__ (FJH-24).

Mr. Hanley shows, in Rejoinder Exhibit__(FJH-32) and the related discussion in his testimony, that Mr. Rigsby's use of betas to conclude that his DCF results do not understate Southwest's required common equity cost rate is entirely without merit. Mr. Hanley shows that Southwest is of greater risk than Mr. Rigsby's proxy LDC group, and indeed of greater risk than those considered by Mr. Hill as well as his own.

THEODORE K. WOOD

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF THEODORE K. WOOD**

## Direct Testimony

Mr. Wood's direct testimony supports the overall rate of return requested for Southwest Gas Corporation's (Southwest or Company) Arizona jurisdiction. Specifically, his testimony provides evidence to support the use of a hypothetical capital structure, the development of the embedded costs of long-term debt and preferred securities, and the resulting overall rate of return. Mr. Wood's testimony is comprised of the following four sections: (1) the development and use of a hypothetical capital structure for ratemaking; (2) the development of the embedded cost of debt; (3) the development of the embedded cost of preferred equity; and (4) a review of the Company's 2003 preferred refinancing.

Mr. Wood recommends the use of a hypothetical capital structure of 42% common equity, 5% preferred equity, and 53% long-term debt. In addition, the Company's embedded cost of long-term debt was calculated to be 7.49% and the embedded cost of preferred equity was determined to be 8.20%. The Company's cost of common equity witness, Mr. Frank Hanley, provides evidence to support a recommended return on common equity of 11.95 percent. The proposed capital structure, when combined with the corresponding, proposed capital cost rates, results in the Company's recommended overall rate of return of 9.40 percent.

The Company also proposes a conservation margin tracker provision (CMT), which was described in the direct testimony of Company witness Mr. Edward Gieseking. If approved, the CMT would provide Southwest with greater earnings stability and Mr. Hanley has recommended a 25 basis point reduction to his return on common equity, from 11.95% to 11.70%. This adjustment would result in an overall lower requested rate of return of 9.29%.

The use of a hypothetical capital structure and Mr. Hanley's recommended return on equity results in an overall rate of return commensurate with returns on investments in other enterprises having corresponding risks, meeting the standards of a fair and reasonable rate of return established by the United States Supreme Court in the landmark Hope and Bluefield decisions.

The Company is continually required to access the capital markets in order to fund continued growth and infrastructure investment. To attract capital and maintain current investment, Southwest must, at the least, maintain its credit ratings and continue to strive to improve them in order to provide current and potential investors with compelling reasons to invest in the Company versus some other investment alternative. The most important reason for an investor to invest in Southwest is his or her belief that the Company will provide an opportunity to earn a competitive risk-adjusted rate of return on that investment.

## **Rebuttal Testimony**

The purpose of Mr. Wood's rebuttal testimony is to respond to specific aspects of the direct testimony presented by Mr. Stephen G. Hill, witness for the Arizona Corporation Commission Utilities Division Staff (Staff) and William A. Rigsby, witness for the Residential Utility Consumer Office (RUCO), regarding their recommendations and comments concerning capital structure and the overall allowed rate of return. In addition, Mr. Wood addresses Staff's recommendation for the Company to file a formal re-capitalization plan to achieve a 40% common equity ratio before the Company's next general rate case.

### Recommended Capital Structure

Both Staff and RUCO recommend using a hypothetical capital structure for ratemaking purposes. Staff recommends a hypothetical capital structure with a lower common equity component of 40% versus the 42% utilized by both the Company and RUCO. Mr. Wood rebuts Staff's justification of using a lower common equity component based on comparisons to the average capital structures of the proxy group companies used by Staff witness Mr. Hill, which had an average common equity ratio of 50.2%. Further, Mr. Wood provides evidence from the National Association of Regulatory Utility Commissioner's and the Federal Energy Regulatory Commission that support the use of the industry average capital structure when employing a hypothetical capital structure. In comparison, the Company's requested capital structure contains less common equity than the average common equity ratio of the proxy groups used by any of the cost of capital witnesses in this proceeding (Southwest's, Staff's, and RUCO's).

### Staff's Recommendation to File a Formal Recapitalization Plan

Mr. Wood recommends that the Staff's proposal for the Company to file a formal recapitalization plan be rejected. Staff, RUCO and the Company all share the common objective for the Company to improve its capital structure. The Company has every incentive to improve its capital structure and the filing of a formal re-capitalization plan with the Commission will not alter that incentive or the speed of the improvement. The Commission, as it has in the past, should determine the authorized capital structure for ratemaking by evaluating the circumstances of the Company and the Company's actions in managing its capital structure. Mr. Wood points out that Staff's testimony is devoid of any recognition of the Company's operating environment or any acknowledgement of the tangible steps the Company has taken to improve its capital structure, which were discussed in Mr. Wood's direct testimony.

Mr. Wood provides further evidence of the Company's commitment to improve its capital structure by testifying that during the time period 1994-2004, the Company has issued approximately 15.8 million shares of common stock, which has netted the Company approximately $313.7 million in proceeds, and the Company has not raised the common stock dividend per share since May 1994. In addition, the Company has issued trust originated preferred securities to help bolster its capital structure.

### The Overall Rate of Return Recommendations of Staff, RUCO and Southwest

Mr. Wood explains that the key concerns about the recommendations of Staff and RUCO are how the recommended return on common equity and the resulting overall rate of return will impact the Company's ability to maintain its existing credit ratings and to continue to attract capital on a reasonable basis. The credit rating impact is an important consideration since the Company's current bond ratings are "BBB-" by S&P,

"Baa2" by Moody's, and "BBB" by Fitch. The added importance is due to Moody's credit rating outlook for the Company being revised from stable to negative in February 2004.

A key factor used by credit rating agencies in evaluating the creditworthiness of a utility is the impact of utility ratemaking, as noted in a recent Standard & Poor's ("S&P") article. The analysis includes whether the new rates are based on a rate of return consistent with the company's rating and if the utility is being afforded a legitimate opportunity to actually earn the authorized rate of return.

Company witness Frank Hanley, provides a schedule in his rebuttal testimony that reveals during the time period January 1, 2003 to June 30, 2005, the average authorized return on equity for litigated cases was 10.91% based on an average authorized common equity ratio of 47.5% for natural gas distribution companies.

RUCO's recommendation of a return on equity of 10.15% is 76 basis points less than the average authorized rate of return on equity of 10.91%, and RUCO's recommended equity ratio of 42% is 5.5 percentage points less than the average equity ratio of 47.5%. Based on this comparison, it is clearly evident RUCO's recommendation is below the authorized returns being granted to other gas distribution companies. Moreover, Staff's recommendation of a return on equity of 9.5% is 141 basis points less than the average authorized rate of return on equity of 10.91%, and Staff's recommended equity ratio of 40% is 7.5 percentage points less than the average equity ratio of 47.5%. Based on a comparison to the average authorized and the Company's recommendation, Staff's recommended return is also woefully inadequate.

**Rejoinder Testimony**

The purpose of Mr. Wood's rejoinder testimony is to respond to specific aspects of the surrebuttal testimony presented by Mr. Stephen G. Hill, witness for the Arizona Corporation Commission Utilities Division Staff (Staff) regarding his comments concerning the appropriate ratemaking capital structure that should be used in this proceeding. Mr. Wood points out that the Commission in Decision No. 57075, allowed for a hypothetical capital structure with 45% common equity, which is higher than the Company's and RUCO's recommended 42% common equity in this proceeding.

Mr. Wood agrees with Mr. Hill that the issuance of additional common stock should not be viewed in isolation, because to understand the Company's current capital structure you need to analyze the circumstances of the Company, including, without limitation, the Company's operating and regulatory environment, the resulting achieved financial performance, and the Company's efforts to manage its capital structure.

Mr. Wood demonstrates that Mr. Hill's equity ratio comparison was not a proper comparison because the Company's common equity ratio has improved, as the Company had a common equity ratio of 31.1 percent as of December 31, 1995 which has increased to 37.0 percent as of June 30, 2005 (Rejoinder Exhibit No.___(TKW-1).

Mr. Wood explains why the use of the 41.7 percent average common equity ratio from Mr. Hill's sample of 30 natural gas industry companies (distribution and diversified companies) should not be used to determine the appropriate common equity ratio in this proceeding because the sample includes companies that are in significant financial distress.

Mr. Wood discusses why the use of permanent capital structure, without short-term debt, which has been the Commission's practice, is the appropriate capital structure for ratemaking. Further, Mr. Wood explains that if comparisons are to be made on total capital structure, including short-term debt, then annual average total capital structure should be used due to seasonality of the natural gas distribution business. Mr. Wood also calculates that Mr. Hill's proxy group of 11 natural gas distribution companies had a an average common equity ratio of 46.8 percent for 2004 and 44.5 percent for 2003 based on total capital (Rejoinder Exhibit No.___(TKW-2).

Mr. Wood explains that the Company has every incentive to improve its capital structure and to improve its bond ratings, and has recently demonstrated this by the additional common stock issued through its $60 million Equity Shelf Program. The majority of the common stock issued through the Equity Shelf Program occurred after the end of the test period and the Company has improved its common equity ratio to 37 percent as of June 30, 2005. Given the fact the Company will continue to experience rapid customer growth, be required to fund significant levels of capital expenditures, and is now facing significantly higher natural gas prices going into the 2005-2006 heating season, in addition to rising interest rates, the Company needs regulatory support to augment its efforts to improve its capital structure and its bottom of investment grade bond rating.

**WILLIAM N. MOODY**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF REBUTTAL AND REJOINDER TESTIMONIES OF**
**WILLIAM N. MOODY**

**Rebuttal Testimony**

William N. Moody, the Vice President/Gas Resources of Southwest Gas Corporation (Southwest), provides rebuttal testimony in response to the direct testimony of William Gehlen, witness for the Arizona Corporation Commission Utilities Division Staff (Staff). His testimony focuses on the recommendations made regarding gas procurement, practices, controls, portfolio planning, and potential changes to the tools used to mitigate volatility for Southwest's Arizona customers.

Mr. Moody discusses certain considerations pertinent to the potential best practice review of gas procurement and planning functions. In particular, the unique nature of each company portfolio and its regulatory environment, and its impact on the usefulness of such a study. Mr. Moody also testifies regarding the adequacy of Southwest's current conflict of interest policy and procurement control procedures as they pertain to the recommendations of Mr. Gehlen.

Mr. Moody further testifies regarding the change of regulatory environment that has allowed Southwest to potentially trade financial instruments to support the Arizona Price Stability Program. He describes the Company's involvement in a project to evaluate the use of these instruments, the cost of a control/tracking system, and organizational changes necessary to implement their use.

**Rejoinder Testimony**

Mr. Moody provides rejoinder testimony in response to the surrebuttal testimonies of William Gehlen and Robert Gray, witnesses for the Arizona Corporation Commission Utilities Division Staff (Staff).

Mr. Moody reiterates that Southwest agrees with the recommendations made by Mr. Gehlen's, which include the following:

1. Conduct a best practices review of the fuel procurement and planning functions by an impartial outside organization and review non-gas commodity hedging.
2. Provide a check and balance in the fuel procurement process that would separate contract award authority from invoice approval authority.
3. Eliminate the use of cell phones during term fuel bidding and negotiating activities and to ensure all discussions are recorded and bidding and negotiation activities are observed by neutral personnel.
4. Perform a review of available portfolio evaluation software.
5. To investigate peer utilities non-gas commodity price hedging with an emphasis on steel.

Mr. Moody also requests 60 days, rather than 30 days, from the date of Commission order to contemplate and report a detailed scope of work for the non-gas commodity hedging survey, portfolio software review, and fuel procurement and planning survey.

Mr. Moody further testifies regarding Southwest's shared concern about potential conflicts of interest and reiterates the steps that have already been taken by Southwest to address this issue. Mr. Moody also testifies that, notwithstanding Southwest's disagreement with Staff that there are not sufficient controls in place to properly address potential conflicts of interest, Southwest is willing to develop further practices and procedures that define or establish measurement criteria for what constitutes substantial stock or other financial interest that will apply to individuals within the purchasing and gas procurement departments.

Mr. Moody also responds to Mr. Gray's recommendations regarding El Paso laterals by explaining that Southwest intends to continue its current practice of building and purchasing laterals for its distribution systems when there is sound business justification for doing so and when the conditions are beneficial to Southwest and Southwest's customers.

**MARTI MAREK**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF REBUTTAL AND REJOINDER TESTIMONIES OF MARTI MAREK**

**Rebuttal Testimony**

Marti Marek, Director of Engineering and Project Support Staff at Southwest Gas Corporation (Southwest) testifies regarding the Arizona Corporation Commission Utilities Division Staff's (Staff) recommendation to fund natural gas-related research through investments with the Gas Technology Institute (GTI). She explains that, while Southwest agrees that funding such research is important and necessary, limiting the investment of those funds with one private, non-profit entity locks Southwest's customers into a single provider of research, when other, equally qualified providers exist.

Ms. Marek further testifies that there are many qualified organizations conducting natural gas-related research and gives examples of the variety of projects that are underway. In addition, she notes that the Department of Transportation, the Department of Energy, the Environmental Protection Agency and other federal agencies have funding for natural gas-related research for which they seek co-funding from the natural gas industry, and further notes that all of these organizations and agencies compete for research funding. Ms. Marek also suggests that by dedicating funds generically to natural gas-related research, without designating a specific research organization with which to invest the funds, the Company's customers and the public are better served since this provides flexibility for the Company, with Commission oversight, to determine which research organizations or projects provide the greatest benefit to its customers.

Ms. Marek also testifies that Southwest agrees with the level of funding proposed by Staff, as well as Staff's proposal to recover costs on a per therm basis from all of Southwest's sales customers, excluding G-30 and B-1 customers. However, in contrast to Staff, Southwest proposes that the funded programs may be operated by organizations other than GTI. Ms. Marek further testifies that Southwest has worked with GTI successfully and that Southwest's recommendation for how research funds should be designated should not be construed to imply that the Company has concerns about the research capabilities of GTI.

**Rejoinder Testimony**

Ms. Marek, in her rejoinder testimony, responds to the Staff's request for further information concerning the research organizations listed in her rebuttal testimony. Ms. Marek further explains how these research organizations have similar or identical research capabilities to GTI.

**ROBERT M. JOHNSON**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF REBUTTAL TESTIMONY OF ROBERT M. JOHNSON**

Robert M. Johnson, Assistant General Counsel, submitted rebuttal testimony to: (i) clarify the apparent misunderstandings in Staff's case regarding the Company's general liability insurance coverage; (ii) address the increasing costs the Company experienced in securing liability insurance during the test year; and (iii) provide additional information that would permit Staff to reevaluate its position regarding the Company's proposed pro forma insurance/claims cost adjustment.

Mr. Johnson explained that the Company was able to secure general liability insurance coverage for the test period with a retention level of $1 million on a per occurrence basis, with the assumption of the first $10 million worth of exposure over the retention level. This level of coverage was selected from a number of options as the most efficient means to manage insurance/claims costs, which resulted in a test year savings to ratepayers of approximately $460,000.

Further, Mr. Johnson corrected Staff's negative implication that the Company has had an abnormal or high number of claims. The Company's claims experience, when compared to other comparable local distribution companies, is on the low-end of the scale with respect to number of claims and parallels the total claims amounts paid by the comparable companies over the last five and ten-year periods. Correcting this negative implication also eliminated Staff's basis for the remaining adjustments to the Company's insurance/claims costs.

Mr. Johnson also testified that the combination of insurance premiums and claims costs that made up the pro forma adjustment is reflective of normal claims experience and overall market conditions.

**LISA E. MOSES**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF REBUTTAL AND REJOINDER TESTIMONIES OF**
**LISA E. MOSES**

**Rebuttal Testimony**

Lisa E. Moses Director/Tax of Southwest Gas Corporation (Southwest) provides rebuttal testimony to respond to the tax aspects of the direct testimony of Dennis R. Rogers, witness for the Arizona Corporation Commission Utilities Division Staff (Staff), and Marylee Diaz Cortez and Rodney L. Moore, witnesses for the Residential Utility Consumer Office (RUCO). Specifically, Ms. Moses' rebuttal testimony discusses the RUCO recommendation regarding income tax lag and the RUCO and Staff recommendations regarding legislative changes that were enacted in 2005 (subsequent to the filing of the Southwest 2004 General Rate Case). Ms. Moses also provides testimony on federal legislation that was enacted subsequent to RUCO and Staff submitting their direct testimonies that should be given equivalent or greater weight of applicability (based upon effective dates) to the property tax legislation discussed by RUCO and Staff.

Based upon RUCO's response to Southwest's data request and Ms. Moses' understanding that Ms. Diaz Cortez is going to revise her testimony to reflect the applicable law with respect to the due dates of federal estimated tax payments, Ms. Moses does not dispute RUCO's revised proposed calculation of 37.5 income tax lag days.

In her rebuttal testimony, Ms. Moses acknowledges that there were two Arizona legislative changes in 2005 that effect the calculation of Southwest's property tax expense for periods beyond the test period but prior to new rates being in effect. The first legislative item relates to contributions in aid of construction (CIAC). Ms. Moses acknowledges that for the property tax year 2005 and subsequent, the Arizona legislature clarified that CIAC is not subject to property taxes. Ms. Moses also acknowledges that the Arizona legislature reduced the assessment ratio when computing property tax expense for property tax year 2006 and subsequent years. The assessment ratio drops by one-half percent a year for ten years beginning in 2006. Ms. Moses also acknowledges in her rebuttal testimony that to be consistent with other proposed post-test period adjustments that the elimination of the property tax expense related to CIAC and the reduction of the assessment ratio to 24.5% would be appropriate.

Ms. Moses also describes other significant federal legislative changes that were published on August 3, 2005, and effective for Southwest January 1, 2005. These legislative changes with respect to the income tax treatment of capitalized costs result in the reversal of prior period deductions taken by Southwest. Ms. Moses computes and explains that the Arizona jurisdiction federal and state property-related deferred tax related to these self-constructed assets is $21,120,694. Ms. Moses further testifies that to be consistent in treatment with respect to changes that are known and measurable and occur post-test period but prior to new rates being in effect, that the following items should be adopted: (1) a 24.5 percent assessment ratio, (2) no property taxes with respect to CIAC, and (3) a $21,120,694 rate base increase as a result of the decrease in plant-related deferred taxes. Ms. Moses concludes that it would be appropriate to make all three adjustments in order to better account for post-test period legislative changes that are effective before new rates go into effect. Ms. Moses also contends that it would not be appropriate to make the first two adjustments without the third adjustment because the third legislative change is effective concurrently with the CIAC provision and one year prior to the assessment ratio being reduced to 24.5% in 2006.

**Rejoinder Testimony**

In her rejoinder testimony Ms. Moses indicates that all changes to the original filed rate case caused by legislative changes be implemented. Based upon surrebuttal testimony by Staff, she provides a considerable amount of detailed worksheets supporting the $21,120,694 rate base adjustment. She concludes that the rate base adjustment is known and measurable, and if not implemented, the Company's deferred taxes will be overstated and rate base will be understated.

**RANDI L. ALDRIDGE**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF RANDI L. ALDRIDGE**

## Direct Testimony

The purpose of the direct testimony of Randi L. Aldridge is to provide a description of Southwest Gas Corporation's (Southwest or the Company) natural gas operations, and to address both direct jurisdictional and system allocable operating expenses and rate base items associated with the Company's natural gas operations, including describing the various allocation methods. In addition, she sponsored fifteen of the Company's nineteen adjustments to operating income and rate base. The adjustments to the Company's operating expenses and rate base items that she sponsored included normal ratemaking adjustments such as the annualization of labor costs, customer billing expense, uncollectible accounts, depreciation and amortization, and property taxes; the normalization of interest on customer deposits; and any necessary adjustments to be in compliance with previous Commission orders and Sarbanes-Oxley Section 404.

## Rebuttal Testimony

In her rebuttal testimony, Ms. Aldridge addresses the following issues: (1) Labor Annualization; (2) Elimination of the compensation of thirty-seven Southwest employees from the cost of service; (3) Sarbanes-Oxley; (4) AGA Dues; (5) Interest on Customer Deposits; (6) Miscellaneous Expenses; (7) Intangible Plant Construction Work in Progress (CWIP); and (8) Completed Construction Not Classified (CCNC).

Ms. Aldridge testifies that the labor annualization is an adjustment that is now known and measurable, and was calculated consistent with the Company's prior general rate cases in Arizona. Ms. Aldridge further testifies that the projected test-year wage increases in the filing were reasonable, and Staff's and RUCO's recommendation to remove the post-test year within grade increases and RUCO's additional recommendation to remove the post-test year general wage increase should be rejected by the Commission. Further, Ms. Aldridge comments on RUCO's proposed reduction of overtime expense should their proposed adjustment to remove the compensation of thirty-seven employees be accepted, and explains why this proposal to adjust overtime expense is incorrect and should be rejected by the Commission. Ms. Aldridge further explains that RUCO's proposal to eliminate 100% of the compensation of thirty-seven Southwest employees from the cost of service is unfounded and should be denied, and that the Commission has previously ruled on this issue in the Company's prior general rate cases and has historically agreed with the Company that **"RUCO's proposed removal of half of the costs associated with sales and marketing staff is not warranted, as these employees are necessary for processing a request for service."**

Regarding the Company's Sarbanes-Oxley (SOX) adjustment, Ms. Aldridge agreed with Staff and RUCO that the estimates provided in the Company's filing should be updated to actual costs, and she prepared a rebuttal exhibit which shows the correct updated amounts. However, Ms. Aldridge submits that Staff's proposed disallowance of a portion of the updated SOX costs is without merit and should be rejected because the costs are recurring, reasonable, and necessary expenses associated with complying with federal legislation.

Ms. Aldridge also testifies that the Company prepared its AGA Dues adjustment in compliance with prior Commission orders and that no further adjustment, as proposed by RUCO, is warranted. Ms. Aldridge explains that the functions of the respective groups that RUCO proposes be disallowed are not similar to marketing or promotional costs the Commission has disallowed in the past, and that the Company has already removed its share of lobbying costs from the AGA dues it paid during the test period.

Ms. Aldridge testifies that the interest rate used to calculate interest paid on customer deposits (which is recovered in operating expenses) must match the interest rate it is authorized to charge customers on their customer deposit balances, and this point has been acknowledged by Staff. Ms. Aldridge also concedes a small portion of RUCO's adjustments related to miscellaneous expense, but contends that the majority of these expenditures was reasonable, recurring, and ordinary business expenses and should remain in the cost of service. Ms. Aldridge also agrees with Staff and RUCO that an intangible plant project that was not completed by mid-2005 should not be included in rate base and believes that the net rate base at the end of the test period related to expiring amortized projects should also be removed. However, Ms. Aldridge contends that the accumulated amortization related to projects with amortizations that expired on or before December 31, 2004 should not be adjusted because the Company does not use a ½ year convention to amortize intangible plant.

Ms. Aldridge also responds to RUCO's proposed adjustment of Completed Construction Not Classified (CCNC) to include only those work orders with an in-service date before the end of the test period by providing further explanation of why the adjustment to CCNC was made, and that the Company only requested recovery for the balance at the end of the test period of certain non-revenue producing work orders. Ms. Aldridge stresses in her testimony that large pipe replacement project work orders can be ongoing for several months and to comply with the *matching principle*, it made a CCNC adjustment to ensure all plant that was serving customers at the end of the test period would be recovered in rates.

**Rejoinder Testimony**

In her rejoinder testimony, Ms. Aldridge addresses the following issues: (1) Labor Annualization; (2) Elimination of the compensation of 37 Southwest employees from the cost of service; (3) Sarbanes-Oxley; (4) AGA Dues; (5) Interest on Customer Deposits; (6) Miscellaneous Expenses; and (7) Completed Construction Not Classified (CCNC).

Ms. Aldridge refutes RUCO's allegation that the 2005 general wage increase and within grade movement are improper and that the Company did not request post test period treatment of any other items besides the wage increases, and lists five additional items which would be considered post test period adjustments.

Ms. Aldridge notes that it was improper for RUCO to rely on the Company's response to RUCO data requests regarding the Sales Incentive Program (SIP) from two prior rate cases that were filed in 1996 and 2000. She notes that the SIP was substantially revised in 2003 and that RUCO is relying on old information that is not relevant to this proceeding. She explains why it is more appropriate to rely on the testimony provided by the Company in this rate case and the most recent Commission decision (Decision No. 57075) to justify the inclusion of these 37 employees in the cost of service.

Ms. Aldridge discusses Staff's Exhibit that lists seven ways to reduce SOX costs going forward, and notes that the article is likely outdated, and that the recommendation of purchasing compliance software is being considered by the Company, but at this time is not being requested for recovery since the amount is not known and measurable. She reiterates that the Company *should* be allowed the opportunity to earn full recovery of recurring, reasonable, and necessary expenses to comply with a federal mandate.

Ms. Aldridge notes that the normalized interest on customer deposit balance has not been disputed by Staff, and that an increase in the customer deposit rate from three percent to six percent doubles the requested expense from $717,364 to $1,434,728.

Ms. Aldridge testifies that RUCO has yet to provide a specific analysis of the material provided in a data response that would reasonably lead to a conclusion that the Public Affairs and Communication groups should be disallowed from the Company's AGA dues.

Ms. Aldridge responds to RUCO's contention that its workpapers provide sufficient justification for its adjustment to Miscellaneous Expenses by noting that RUCO's workpapers contain nothing more than a vendor name, dollar amount, and invoice number, which is an insufficient level of detail for anyone to determine whether the transaction should be disallowed. Ms. Aldridge further testifies that she performed a line-by-line analysis of the transactions RUCO proposed to disallow, and determined that the transactions not conceded in her rebuttal testimony are reasonable business expenses that should be allowed in rates.

Ms. Aldridge notes that RUCO's belief that the Company should have requested post test period plant for its CCNC is improper since the plant was used and useful during the test period. She also notes that there was no inconsistency between her direct and rebuttal testimonies, since RUCO was comparing a statement regarding system allocable miscellaneous intangible plant in her direct testimony to a statement regarding non-revenue producing gas plant in her rebuttal testimony.

**ROBERT A. MASHAS**

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-1551A-04-0876**

**SUMMARY OF DIRECT, REBUTTAL AND REJOINDER TESTIMONIES OF ROBERT A. MASHAS**

**Direct Testimony**

The direct testimony of Robert A. Mashas in this rate application provides a broad overview of Southwest Gas Corporation's (Southwest or Company) rate application, an explanation of the major reasons and underlying causes for the Company's current deficiency, and discusses the proposed adjustments to the test year that Mr. Mashas is supporting, among other items.

Mr. Mashas testifies regarding four major reasons and underlying causes for Southwest's present revenue deficiency: 1) decline in average residential use per customer ($15.2 million); 2) increases in operation and maintenance expense ($24.0 million); 3) the Company's proposal for an increase in the cost of capital above the levels previously authorized ($8.1 million); and 4) injuries and damages ($3.0 million). Mr. Mashas also testifies regarding the results of the Company's operations in its Arizona jurisdiction for the 10-year period 1994 through 2004 and points out that the Company's actual returns are demonstrably less than the Commission's authorized return in all years except 1998, which was favorably impacted by weather.

Mr. Mashas also discusses the three adjustments he supports in his testimony, which are as follows: 1) Injuries and Damages; 2) Transmission Integrity Management Program (TRIMP); and 3) and Phoenix light rail. Mr. Mashas explains that the injuries and damages adjustment consists of two parts: 1) annualization of premiums for insurance policies in effect at August 31, 2004; and 2) normalization of the Company's self-insured portion of a liability claim. Mr. Mashas notes that annualizing expense at test-year-end is a typical rate case adjustment, and explains that the Company is proposing to change the normalization period from the previously accepted five-year period to a 14-year period. Mr. Mashas also testifies that due to federal legislation all natural gas companies have been directed to undertake certain safety measures not previously required, they are referred to as TRIMP. The Company has adjusted the test year TRIMP expenses to reflect an amortization of incremental amounts deferred through the effective date of rates in this proceeding and to establish an ongoing level for the future. Mr. Mashas also testifies regarding the Company's compliance with its agreement with the City of Phoenix regarding the removal from rate base of all relocation costs resulting from the Phoenix light rail project.

Mr. Mashas also details the Company's process for evaluating and determining the cost justification of serving new residential customers, which was requested by the Commission in its decision resulting from Docket No. G-1551-00-309.

Mr. Mashas testifies regarding the Company's proposals regarding the calculation of pipe replacement disallowance for certain pipe types addressed in a 1993 Settlement Agreement. The proposal pertains to the establishment of a 40-year standard, which provides that no disallowance of pipe replacement cost is required once a pipe has served the customer for at least 40 years. The Company also submits that the historically small levels of Aldyl A, ABS and 1960s steel that have taken place since January 2000 were not the result of the criteria (defective material or improper installation) established in the Agreement, and as such, the Company contends no disallowance should be required.

**Rebuttal Testimony**

In his rebuttal testimony, Mr. Mashas addresses the following issues: 1) Supplemental Executive Retirement Program (SERP); 2) Management Incentive Plan (MIP); 3) Transmission Integrity Management Program (TRIMP); 4) Pipe Replacement; and 5) Injuries and Damages.

Mr. Mashas testifies regarding the Residential Utility Consumer Office's (RUCO) proposal to remove the entire cost of SERP from rates. Mr. Mashas explains that the SERP is necessary to compensate the company's management with a retirement benefit equivalent to the basic retirement plan (BRP) that is provided to all other Southwest employees, due to the IRS limitations associated with the BRP. Mr. Mashas further explains that the Commission rejected a similar RUCO proposal in the Company's last general rate case.

Mr. Mashas responds to RUCO's and the Arizona Corporation Commission Utilities Division Staff's (Staff) respective proposals to remove a percentage of the cost of MIP from the cost of service. Mr. Mashas explains that the MIP compensates the Company's management for achieving five pre-set goals that benefit the customer by reducing labor, maintaining high customer satisfaction, and reducing future rate increases by maximizing revenue and reducing non-labor related expense. Two of the five target goals focus specifically on customer to employee ratios, which results in lower labor cost. A third goal, which focuses on customer satisfaction, ensures that reduced labor cost does not impact customer satisfaction. The final two target goals use return on equity (ROE) as a measurement tool. To achieve ROE targets management must effectively manage all costs resulting in increased net income. Improved net income results in more investment supported by shareholder funds, which leads to lower cost of capital. By improving net income, the customer benefits in one of two ways, there will be either a longer period between rate cases or a smaller increase when a rate case is filed.

Mr. Mashas also responds to RUCO's proposal to include TRIMP cost in rates based on the most recent cost estimates provided by the Company by acknowledging the Company's acceptance of RUCO's proposal. Mr. Mashas then rebuts Staff's proposal to remove all TRIMP costs from general rates, to have the Company share with customers the original Company cost estimates, and the use of a cost tracking mechanism, which entails a separate line item on the customer's bill. Mr. Mashas testifies that the Company recommends that the Commission reject the Staff proposal because the Staff provides no basis for the 50/50 sharing of cost resulting from a federally mandated safety program and a cost tracking mechanism including a separate line item on the customer bill is not warranted because of the *de minimus* monthly cost associated with the program.

Mr. Mashas also testifies that the Company and RUCO agree to use the Company's 40-year standard for pipe replacement, but on a go forward basis. He further notes that the ABS and 1960s steel have already reached the 40-year mark of service and future write-offs are no longer required, but that write-offs for Aldyl A and

Aldyl HD will continue until 2013 and 2020, respectively. However, Mr. Mashas notes that the Company disagrees with using the write-off percentages contained in the Agreement for adjustments to Aldyl HD pipe. Mr. Mashas submits that the percentages derived using the 40-year standard more accurately measure the portion of pipe replacement cost that should be removed from rate base. Mr. Mashas also notes the Company's disagreement with RUCO that there should be pipe replacement write-offs related to 1960s steel since the end of the test year in the last rate case because those replacement expenditures did not result from the criteria set forth in the Settlement Agreement.

Mr. Mashas also responds to Staff's proposal to remove both the annualization of the test year-end insurance policies and the normalization of the self-insured component of liability claims. As a result of Staff's adjustment, the test year recorded levels would be used to establish rates on a go forward basis, which is a deviation from prior rate cases. Mr. Mashas further testifies that the Company disagrees with Staff's assertion that its claims experience is poor and believes that its proposed annualization of test-year insurance policies and 14-year normalization of the self-insured component of liability claims is consistent with prior rate making treatment of such costs and should be included in rates.

**Rejoinder Testimony**

In his Rejoinder testimony, Mr. Mashas addresses the following issues: 1) Supplemental Executive Retirement Program (SERP); 2) Management Incentive Plan (MIP); 3) Transmission Integrity Management Program (TRIMP); 4) Pipe Replacement; 5) Injuries and Damages; and 6) Line Extension Practice, Residential Class Results and Declining Average Use.

Mr. Mashas highlights the flaws in RUCO's analysis regarding the disallowance of SERP and concludes that RUCO has yet to provide any analytical evidence that the Company's top executives' overall compensation package is excessive.

Both RUCO and Staff continue to propose to exclude a portion of the Company's MIP expense from the cost of service. RUCO recommends excluding 67 percent while the Staff proposes 50 percent. The Commission indicated in its last decision, Decision No. 64172, that the Company provided sufficient evidence to support a 100 percent inclusion of three factors of the MIP in its cost of service. However, the Commission disallowed the two factors relating to improved return on common equity. Mr. Mashas presents evidence demonstrating why the full cost of all five factors that comprise the MIP should be allowed in the cost of service.

Mr. Mashas testifies that the Company is confident that its reduced TRIMP estimate reasonably reflects the level that should be included in rates in this proceeding. The Company does not disagree that a tracking mechanism, proposed by staff is inherently wrong, however, a tracking mechanism that guarantees that the Company will only recover 50 percent of the cost of a federally-mandated safety program is improper.

The Company disagrees with RUCO as to authority that the Commission has in establishing the effective date of the change in the write-off percent for Aldyl HD pipe. Mr. Mashas explains that the Company's position is that the Commission can determine, in this proceeding, that the write-off percentages derived using the 40-year standard can be applied to Aldyl HD replacement expenditures undertaken since the last rate case.

Mr. Mashas testifies that the Company's accepts Staff's position that a 10-year average of the self-insured portion of liability claims is reasonable. The Company does not agree with RUCO's adjustment to the Company's originally proposed 14-year average. However, with its acceptance of Staff's 10-year average, the RUCO issue is no longer applicable since the activity in question in the RUCO adjustment occurred outside the 10-year activity contained in Staff's number.

Mr. Mashas testifies that Staff's concern regarding how new customer growth can earn 9.20 percent while the residential class is earning 2.29 percent is unfounded. The Company earns at least 9.20 percent on an incremental basis through its practices in applying Tariff Rule No. 6, Service and Main Extensions, by requiring either a refundable advance or non-refundable contribution to insure new customer growth is earning 9.20 percent. Mr. Mashas then expands on his direct testimony and explains why all classes, including the residential class, is not earning its authorized rate of return. Mr. Mashas also testifies that in order to recover the entire cost of service assigned to the residential class in the Company's last general rate case, the average customer use would need to be 388 therms which would result in an average margin per cost collected of $274.13. Mr. Mashas also testifies that there is uncontradicted testimony in this proceeding that the average residential customer use has declined to 347 therms which results in average margin collected of $254.85, or $18.28 less per customer than was contemplated in the company's last general rate case. Mr. Mashas notes that between rate cases this negatively impacts earnings and is a component of the $70.8 million deficiency.

Mr. Mashas explains that the Company provides three alternative rate design proposals in order to illustrate the fact that how rates are designed impacts margin recovery between rate cases and ultimately the deficiency in the next rate case. The Company shows that declining average use has been experienced by both existing (vintage) and new (added subsequent to the last rate case) customers, and this fact has had a negative impact on the Company's ability to earn its authorized rate of return. Mr. Mashas also testifies that the Company presents rate design proposals, including a conservation margin tracker, that address the negative impact that results from declining average residential use.